Epi Notes

North Carolina Department of Health and Human Services ◆ Division of Public Health

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In This Issue:

The Severe Acute Respiratory Syndrome (SARS): A New Infectious Disease

Prepared by Jeffrey Engel, M.D., Head, GeneralCommunicable Disease Control Branch and Kathryn Dail, Nurse Epidemiologist

On February 21, 2003, a previously healthy middle-aged Chinese traveler from the southern province of Guandong checked into a hotel in Hong Kong. He had been ill for six days with a high fever, headache and myalgias followed by a dry cough and difficulty breathing. His illness progressed rapidly and on February 22 he was admitted to a Hong Kong hospital and died five days later of pneumonia and acute respiratory distress syndrome.

This was the index case that began the worldwide SARS epidemic. By mid-March, it had become clear that a mysterious respiratory illness with a significant mortality rate had been festering unchecked in Guandong since November 2002. The traveler, after only a 24-hour stay, had transmitted the disease to 10 other people on the 9th floor of the Hong Kong hotel and to dozens of health care workers during his five-day hospitalization.

By March 1, the 10 secondary cases had spread SARS to three other Hong Kong hospitals, as well as Hanoi, Vietnam, Singapore, Toronto, Canada, the United States, and Ireland. The following week, the World Health Organization declared a global public health emergency. On March 14, the Centers for Disease Control and Prevention opened its emergency operation center for the third time (the previous openings were in the fall of 2001 for the anthrax-tainted letters and in the summer of 2002 for the West Nile Virus epidemic).

On March 17, the North Carolina Department of Health and Human Services announced its first two suspect SARS cases from Wake and Orange counties. By early April, six suspected cases were under investigation and on April 9, the Division of Public Health opened the Public Health Command Center (PHCC) for the first time to handle the SARS crisis. The potential risk from SARS re-

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*(**The SARS Syndrome,** continued from page 1)*
sulted in numerous calls from concerned citizens with an increase in communications from health care practitioners and public health disease investigators across the state.

SARS is a new infectious disease of humans and is illustrative in many ways of the social and scientific environment of the 21st century. First, SARS has taught us how rapidly an infectious agent transmitted by droplet aerosol can spread globally in the era of modern travel. Second, SARS serves to remind health care providers managing acutely ill people that they are at risk to be the early victims of new and emerging infectious diseases. Third, in the era of bioterrorism, public health is better prepared to handle unexpected epidemics. Many believe that early activation of command centers greatly curtailed the spread of SARS in the United States. Finally, thanks to the striking advances in micro- and molecular biology, in just six weeks after the index case, laboratories from around the world identified a novel coronavirus as the cause of SARS, developed diagnostic tests, and published the sequence of its 30,000-base RNA genome.

By May 15, North Carolina reported eight suspected cases of SARS in seven travelers and one health care worker. Five of these eight were from Wake County. All tested negative for the SARS-associated coronavirus by culture, nucleic acid detection by polymerase chain reaction, and acute and convalescent serology. All eight had mild illness and were isolated for 10 days after cessation of symptoms. On May 14, the Commission for Health Services approved a temporary rule making SARS a communicable disease that physicians must report under NC General Statute 130A-135. State and local health directors have the authority to enforce isolation and quarantine of suspected SARS patients and their contacts under NC GS 130A-145.

The PHCC operated continuously until May 16 with staffing from the General Communicable Disease Control Branch, Occupational and Environmental Epidemiology, and the Office of Public Health Preparedness and Response. In mid-May, with call volume decreasing, the center stopped daily staffing but kept the hotlineopen to provide an immediate response to the health care community.

The Command Center resumed staffing on June 9 in response to North Carolina's first laboratory confirmed case of SARS. This occurred in an Orange County man who had returned from a trip to a Toronto-area hospital to visit a family member. During that crisis, the center was staffed from 8 a.m. to 10 p.m., seven days a week. Students from UNC's Institute of Government also provided supplemental staffing.

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West Nile Virus 2003

Prepared by Leslie Wolf, Ph.D., Assistant Director
North Carolina State Laboratory of Public Health
and Jeffrey Engel, M.D., Branch Head
General Communicable Disease Control Branch

During the 2002 summer season, surveillance established West Nile virus (WNV) activity in many North Carolina counties. Despite last year's statewide drought, WNV infection was detected in wild birds in 76 out of 100 counties, in 30 horses from 22 counties, and in two humans (one presumably through a blood transfusion). With the rainy spring of 2003, WNV activity may be more prevalent this year.

The ideal surveillance predictor of human disease is not well established, but activity for the 2003 season will emphasize monitoring of dead birds. Public reporting of dead birds via the dead-bird hotline (1-877-790-1747) is critical surveillance information; perhaps, more important than submitting dead birds for testing since we already know that WNV infection is present in the bird population.

This year crows, blue jays, cardinals and birds of prey (hawks, owls, etc.) may be submitted through the Public Health Pest Management Section, local health departments, animal control offices or environmental health agencies. The North Carolina State Laboratory of Public Health will test dead birds until there is a positive from that county. Appropriate precautions should be used when handling dead birds, such as wearing gloves and placing dead birds in plastic bags. To submit dead birds for testing, the correct form must be filled out completely. Forms can be found on the Internet at: http://www.deh.enr.state.nc.us/phpm/local_programs/Forms/forms.html

The North Carolina State Laboratory of Public Health performs serological assays to determine whether patients have been exposed to a flavivirus, such as West Nile virus, and other arboviruses of interest in North Carolina. Correctly completed forms must accompany submission of serum samples to better serve the patient, the health care provider, and the laboratory in evaluating syndromes consistent with arboviral infection. Forms for human testing may be found on the Internet at: http://slph.state.nc.us/ and clicking "Virology/Serology/Arbovirus" or "West Nile Virus testing".

This year the State Laboratory will perform nucleic acid amplification tests (NAAT) on birds and mosquitoes submitted through the Public Health Pest Management Section to

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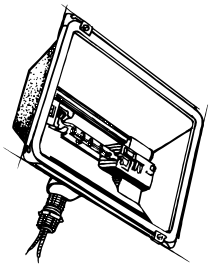
Preventing Potential Injuries from Damaged Gym Lighting

Prepared by Dr. Rick Langley, Medical Epidemiologist and Mr. Ron Howell, Industrial Hygienist, Occupational and Environmental Epidemiology Branch

The following is a report provided by Nicole Smith, PhD, MPH, MPP, Epidemiologist, with Centers for Disease Control and Prevention (CDC). It should be noted that two of the reports on injuries resulting from damaged gym lighting occurred in private schools located in North Carolina. Epidemiologists, physicians, and industrial hygienists from the Division of Public Health and CDC conducted detailed investigation into these particular situations. For details on these investigations you can contact Dr. Rick Langley 919-715-6428 or Mr. Ron Howell 919-733-0502.

The Centers for Disease Control and Prevention (CDC) and the Lamp Section of the National Electrical Manufacturers Association (NEMA) would like to share the following information with you regarding prevention of potential injuries that may result from broken high intensity metal halide or mercury vapor light bulbs that are used in school gymnasiums and assembly halls.



Background

In 2001 and 2002, CDC received five reports of groups of school students, staff, and parents who developed skin burns and eye irritations from suspected exposure to ultraviolet radiation. These injuries occurred in school gymnasiums and assembly halls that were illuminated by high intensity metal halide or mercury vapor light bulbs. These light bulbs were partially broken, which allowed them to emit ultraviolet light.

The reported number of persons injured ranged from 10 to more than 50 per incident. The extent of the injuries varied, including flushed or sunburned-like skin, headaches, blurred vision, and burning or itchy eyes. In one incident, as many as 44 persons sought care from health clinics or hospital emergency departments.

To assist you and your staff with preventing these injuries from occurring in the future, the Lamp Section of the National Electrical Manufacturers Association has developed a useful set of maintenance recommendations for these light bulbs. Please see the text below. The recommendations can also be found at www.nema.org ; search under "metal halide". If you have difficulty opening the attachments and want a copy of the recommendations by fax, please fax your request to 703-841-3374.

Recommendations for the Care and Maintenance of High Intensity Metal Halide and Mercury Lighting in Schools

For the past several years, schools have occasionally reported instances of skin burns and eye irritation, which have been traced to broken high intensity metal halide or mercury light bulbs used in many school sports facilities and assembly halls. Some schools may be using these bulbs in lighting fixtures that do not fully enclose the bulbs, which expose the bulbs to damage from balls or other flying objects. If the light bulbs are struck so that the outer glass of the bulb breaks, they may continue to operate, and become sources of ultraviolet radiation. This radiation, which is similar to the UV radiation from strong sunlight, can cause skin burns and eye inflammation.

To minimize these incidents, the following procedures are recommended:

*If the outer glass bulb breaks - which is obvious from falling glass, or the presence of glass on the floor - IMMEDIATELY TURN OFF THE FIXTURE. Do not turn it on again until the bulb is replaced by a competent maintenance person wearing suitable protective equipment, such as eye protection and work gloves.

* Lighting fixtures that fully enclose the bulbs and have a lens of glass or plastic material are recommended for any lighting installation that is at risk from damage from flying objects. These fixtures-in conjunction with regular bulbs, are the most efficient and cost less to maintain.

* Wire guards on open fixtures, or fixtures with damaged lenses, do not give protection against UV radiation from a broken bulb.

* If an installation does not have fully enclosed fixtures, a self-extinguishing bulb can be ordered through electrical suppliers. The bulbs include the letter "T" in their model number. However, these bulbs are not available in all sizes, give less light and generally cost more than regular bulbs.

*The use of self-extinguishing bulbs does not prevent bulb breakage; the bulbs simply turn off automatically after the outer glass of the bulb is broken.

*School supervisors should make sure that those responsible for the maintenance of these lighting systems fully understand the federally-mandated and other caution notices that manufacturers print on the packages of these light bulbs.

*Report all incidents that involve injury associated with the use of metal halide or mercury bulbs to the light bulb manufacturer, who in turn is obligated to report to the Food and Drug Administration. It is important to retain any broken bulb to assist in positive identification of the manufacturer.

Additional information about "best practices" for metal halide lighting systems, including a question-and-answer section, is available at www.nema.org <http://www.nema.org/>, search under "metal halide".

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Prostitute Focus Group North Carolina

Prepared by Pete Moore, Unit Manager, Field Services HIV/STD Prevention & Care Branch

North Carolina has had moderate success in its efforts to control and contain sexually transmitted diseases in the past four years. N.C. primary and secondary syphilis (P&S) rates have been reduced by 63% (723 cases vs. 271 cases) between 1998 and 2002 and the state is steadily heading towards syphilis elimination. Although these numbers are encouraging, rates of STDs in the state remain unacceptably high. North Carolina is one of ten states with the highest levels of reported syphilis according to 2002 preliminary CDC data. It is within this framework that the North Carolina Syphilis Elimination Program (SEP) decided to focus efforts on potential "core transmitters" such as prostitutes and other high-risk populations.

In 2002, Durham County reported the highest number of primary and secondary syphilis cases in North Carolina. From 2001 to 2002, Durham County demonstrated a 61% increase in P&S cases, reporting 16 cases in 2001 and 47 in 2002. Interviews by Disease Intervention Specialists (DIS) working in Durham County revealed that prostitutes played a large role in syphilis transmission during this outbreak. To address this, the North Carolina HIV/STD Prevention and Care Branch decided to conduct focus groups among prostitutes in the Durham County Jail. These focus groups were intended to garner information about the prostitutes' attitudes, knowledge and beliefs relative to syphilis in order to target prevention efforts to this core transmitter population.

In the fall of 2002, branch staff conducted two focus groups in the Durham County Jail. Each group consisted of eight self-identified commercial sex workers with the following characteristics:

- 24 to 40 years old
- Fifty percent African American
- Fifty percent Caucasian
- All admitted recent crack cocaine use
- Seventy-five percent stated they had previously tested positive for a STD

The participants were asked a series of questions to gather their opinions on issues such as condom use, access to heath care, intervention sites, counseling messages and effective interventions. Each session was audiotaped for transcription, and qualitative analysis was conducted on this data to detect common themes among the responses.

The participants of the focus groups identified the following barriers to outreach activities: 1) All participants stated that using religious messages in counseling is a deterrent to seeking help. 2) While aware of community condom distribution sites, most did not access them due to the hours of availability, perceived cost of condoms, and possible intimidation resulting from their identification as prostitutes. 3) Participants were not interested in a full education session with each street outreach encounter. They also cited drug use and the need to generate income as competing interests and demands on their time. Most would rather receive condoms, incentives to get tested, and be offered field testing in a quick, unobtrusive manner.

Findings from these focus groups indicate: (1) linking faith initiatives with STD prevention may not be an effective means of reaching this core transmitter population (2) sites such as hotels, gas stations, and bathrooms or other places open 24 hours a day should be considered when selecting condom distribution sites (3) More efforts are needed to involve prostitutes in the design of outreach and risk reduction activities. The Branch plans to act on these recommendations but realizes that this was a limited survey and recognizes the need to focus more study on the commercial sex worker population in Durham County and other high morbidity areas of North Carolina.

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*(**SARS,** continued from page 2)*

The PHCC team used a public health preparedness and response matrix developed by Dr. Jim Kirkpatrick, Director of the Office of Public Health Preparedness and Response. Matrix issues discussed during daily briefings were surveillance; disease investigation; vaccination and prophylaxis; quarantine and isolation; mass care; mass fatality; public information; and command, control, and communication. Originally opening for SARS, the PHCC is prepared to deal with other matters of public concern, including West Nile Virus and Monkeypox.

It is difficult to predict what the future of the SARS epidemic will be. Certainly, any infectious disease that is spread by the respiratory route and with a mortality rate as high as 20% will demand vigilance by clinicians and public health. It is hoped that control measures will soon transition from the old isolation and quarantine to the modern immunizations and antiviral medications.

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Rabies in a Currently Vaccinated Cat, Wake County

Prepared by Lee Hunter, D.V.M., M.P.H.,
Public Health Veterinarian,
Occupational and Environmental Epidemiology Branch

In August 2002, a two-year-old female cat living in Wake County was diagnosed with rabies. The number of cats diagnosed with rabies in North Carolina has increased over the past few years; the fact that this cat was currently vaccinated against rabies is especially noteworthy. While it is not unheard of, it is rare, especially when the cat had been vaccinated multiple times during its life.

The cat lived inside the house but was allowed to roam outside as well. The animal had access to the outside through a "cat door." There were no noted contacts with potentially rabid animals during the last six months of the cat's lifetime.

The facts of the case were:

- The cat was first vaccinated with a subcutaneously administered rabies vaccine on 7 Aug. 2000.
- A second vaccination was administered with a subcutaneously administered rabies vaccine on 10 Aug. 2001.
- The cat began behaving oddly and was aggressive toward other cats and people in the house on 10 Aug. 2002.
- The cat violently attacked the owner and others on 10 Aug. 2002. It then escaped from the house into the neighborhood.
- The cat was captured by Raleigh Animal Control on 11 Aug. 2002.
- Rabies testing by State Laboratory of Public Health (SLPH) confirmed the cat as rabid 12 Aug. 2002. The testing was confirmed by the Centers for Disease Control and Prevention. The "strain" of the rabies virus was one associated with bats.
- The cat was not tested for immunosuppressive diseases.

There are several possible explanations for the cat contracting rabies. Those are:

- Lack of vaccine potency.
- Immunological failure of the cat to respond to vaccination.
- Immunological failure of the cat to respond to the viral challenge.
- Overwhelming dose of rabies virus during the viral challenge.
- Rabies virus introduction into a nerve or near a cranial or spinal nerve.

Animal rabies vaccines are licensed for use in the United States by the United States Department of Agriculture after meeting standards for vaccine efficacy, including challenge studies. The USDA was notified of this case. Though there were other cases of currently vaccinated pets in the United States contracting rabies during 2002, there was no significant epidemiological evidence of increased vaccination failures associated with this or any other animal rabies vaccine. No other cases of animal rabies diagnosed in North Carolina during 2002 occurred in currently vaccinated animals.

North Carolina law (GS 130A-196) requires that all dogs and cats that bite a person be quarantined for 10 days following the bite of a person. This case vividly demonstrates the reasoning behind quarantining all dogs and cats regardless of the rabies vaccination status of the animal.

The same statute requires that the owners of a dog/cat that bite a person notify the local health director immediately. The obligation to report also extends to the person bitten as well as "**any physician that attends a person bitten by an animal known to be a potential carrier of rabies …**"

The Occupational and Environmental Epidemiology Branch recommends a full necropsy, including looking for signs of immmunosuppressive diseases, be conducted on dogs/cats currently vaccinated against rabies that are diagnosed with rabies.

The Veterinary Public Health Program (Division of Public Health, NC Dept. of Health and Human Services) provides 24 hour per day assistance to health care providers in assessing the rabies risk associated with the bite of a person by an animal. They also provide assistance with dosage and scheduling regimens involved in post-exposure rabies treatment. Printed and electronic materials about rabies and its treatment are available free of charge.

The phone numbers for Veterinary Public Health are:
weekdays: (919) 733-3410
nights/holidays/weekends: (919) 733-3419

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Public Health and Law Enforcement Partnerships

Prepared by Royden Saah, MS, Public Health Scientist
North Carolina State Laboratory of Public Health

Before September 11, 2001, the partnership between law enforcement and public health was limited to very specific instances where such interactions were required. Such instances include the containment of non-compliant carriers of infectious diseases that threaten the health of their contacts (i.e. HIV & TB) and sexual abuse cases that involve infectious disease organisms that can be genetically linked between the victim (usually a minor) and perpetrator. The terrorist attacks of September and October 2001 have necessitated expanding and strengthening public health and law enforcement interactions.

When investigating the real or threatened use of a biological agent as a weapon, the investigation is immediately two-pronged in nature. Infectious agent confirmation and disease investigation fall into the realm of public health, while criminal investigation and prosecution is the jurisdiction of law enforcement. To function effectively and efficiently, it is important for public health to have at least a preliminary understanding of how law enforcement investigations must be conducted. Conversely, law enforcement must have a good understanding of the public health investigative process. One incident worth noting involved threat letters being mailed to three different individuals. Threat letters were submitted to the NCSLPH by three different law enforcement agencies (North Carolina State Highway Patrol, Raleigh Police Department, and State Capitol Police). The laboratory bioterrorism (BT) team member processing and analyzing the samples noticed obvious similarities in all three threats. The laboratorian reported this to all three submitting agencies and the investigation was quickly turned over to the State Bureau of Investigation for coordination purposes. The NCSLPH recently began digitally recording evidence, such as threat letters, which allows the FBI to start their investigation before the evidence is declared "safe" by standard laboratory methods.

Early in the investigation of the index case of anthrax in October 2001, employees of the NC Division of Public Health and the Federal Bureau of Investigation coordinated efforts to identify the source of the anthrax illness (Emerg Infect Dis Oct. 2002 www.cdc.gov/ncidod/EID/vol8no10/02-0389.htm). Investigators in Florida soon discovered the source of *B. anthracis* spores at the index case's place of employment. The evolving threat and subsequent panic created an environment that required law enforcement and public health officials not only to have each other's contact information, but also to communicate and coordinate activities to protect the public from intentional or threatened release of biological agents.

At NCSLPH, the Bioterrorism Response Team works frequently with local, state, and federal law enforcement on a frequent basis investigating threats involving biological weapons of mass destruction. The chain of custody process is required in order to use the results generated by public health laboratories as prosecutorial evidence. Chain of custody procedures were planned, established, and refined by the CDC and FBI prior to the anthrax attacks of 2001. The anthrax attacks tested the chain of custody process and procedures at NCLSPH. When analyzing samples, the laboratory staff handles items that potentially will be used as evidence during a subsequent prosecution. Therefore, laboratory staff must use the same procedures to handle evidence that law enforcement agencies employ so as not to compromise potential evidence with issues of admissibility.

Law enforcement and public health officials at the local, state and federal level recognize the need to continue building the partnership. To that end, several organizations including the CDC, FBI, UNC-CH Center for Public Health Preparedness, NC Division of Public Health, NC State Bureau of Investigation and others created a "Forensic Epidemiology" pilot course to bring public health and law enforcement entities closer together. Local health directors, sheriffs, epidemiologists, detectives and chiefs of local police department, laboratory directors and others were brought together to determine ways to increase effectiveness and efficiency. A key point emphasized during the course is the need for coordination of the investigation from the first moment criminal activity is suspected. Coordinating investigations is not always easy since public health and law enforcement are different disciplines; for example the definition of "case" in public health is different than the meaning of "case" in law enforcement. Thus, by learning key terms and speaking the same language, both public health and law enforcement can effectively investigate both kinds of cases for the good of the public.

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Faithful to the Call: A Union of Public Health and the Faith Community

Prepared by Linda Carter, Manager, Prevention Unit
HIV/STD Prevention & Care Branch

The North Carolina Department of Health and Human Services is pleased to announce its upcoming Faith Conference, ***Faithful to the Call: A Union of Public Health and the Faith Community.*** The conference is scheduled for November 5 – 7th, 2003 at the Downtown Marriott in Greensboro, North Carolina. The conference is the first inter-divisional endeavor targeting churches and religious institutions of all denominations from across the state. Involvement and enthusiasm has been great for everyone sharing in the planning. Since February 2003, a group consisting of representatives from the NC HIV/STD Prevention and Care Branch, Division of Medical Assistance, Women's and Children's Services, Mental Health/Substance Abuse and Developmental Disabilities, Health Promotion, Cancer Prevention, Tobacco Prevention and Control, the Office of Minority Health and Health Disparities, the Faith Brain Trust, Regional AIDS Interfaith Network, and the Commission on Indian Affairs have collaborated on this event.

The purpose of the conference is to create a forum for dialogue within faith communities and between faith leaders and health and human service agencies to focus on health disparities and formulate solutions.

Our conference goals are to:

- increase awareness of faith leaders and health professionals regarding health disparities issues affecting communities of color.
- establish processes for ongoing interchange among health professionals and the faith community.
  highlight best practices that utilize multiple approaches for addressing health disparities.

By the end of the conference, participants will be able to:

- establish or enhance community, faith-based, agency, and capacity building partnerships.
- develop action agendas to address health disparities.
- share and disseminate information about current and emerging health issues in communities of color.
- access financial and programmatic resources from a variety of partners.

The opening sessions for the conference will consist of a congressional roundtable and reception focusing on the state of health among minorities in North Carolina. Clergy and local legislators will discuss their goals for promoting better collaboration with churches and the health of their communities. Our plans also include securing a representative from President George Bush's administration to present the current National Faith Agenda and its impact on states, specifically North Carolina. The Office of Minority Health and Health Disparities' "Report Card" will serve as the benchmark for discussion and strategizing solutions for improving the health and well-being of African Americans and Latinos. The first full day of the conference, Thursday, November 6th will include a welcome and remarks from Dr. Leah Devlin, North Carolina's State Health Director and Director of the Division of Public Health, with a keynote address by the Tennessee Department of Public Health Commissioner, Kenneth S. Robinson, MD. A series of concurrent educational sessions will follow throughout the day with highlights of cultural entertainment from African, Indian and Latino dance groups. Topics will include: Your Health Throughout the Lifespan, Models that Work in Churches, Developing Partnerships Between Churches and Local Funders, and Access and Availability of Health Services.

Exhibitors will share important health information on Wednesday and Thursday while gospel choirs bring in praises from the participants. For more information, contact Northwest AHEC at (336) 713-7708 or Linda Carter at (919) 733-9576.

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*(**West Nile Virus 2003**, continued from page 2)*

assist with West Nile virus surveillance activities in North Carolina. Selected veterinary specimens may also be tested for arboviral illness through a combination of viral culture, serology and/or NAAT assays.

As in previous years, the focus is on educating the public about protection from mosquito bites by limiting outdoor activities at dusk, wearing insect repellent, making sure open doors and windows have screens, and limiting the amount of standing water around residences. Horse owners are encouraged to vaccinate their animals against WNV. A human vaccine is not yet available.

Further questions related to laboratory testing may be directed to the State Laboratory of Public Health at 919-733-7834, mosquito control and dead bird questions to the Department of Environment and Natural Resources Pest Management Division at 919-733-6407, and human health, disease surveillance and reporting to the General Communicable Disease Control Branch at 919-733-3419.

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Preparation of Proposals for HRSA, CDC and ODP Grants

Prepared by Jim Kirkpatrick, MD, MPH, Head
Office of Public Health Preparedness and Response

Teams under the direction of Drexdal Pratt and Jim Kirkpatrick have prepared proposals for the Health Resources and Services Administration (HRSA) and Centers for Disease Control and Prevention (CDC) bioterrorism grants. Both proposals were developed by and reviewed with internal and external partners throughout the state. Local health directors were represented on the CDC grant writing team by John Morrow from Pitt County and Dorothy Cilenti from Chatham County. The proposals were submitted to HRSA and CDC on July 1. After the addition of funds related to the Strategic National Stockpile, North Carolina's apportionment in the CDC grant now totals $26M. The HRSA figure remains at $13.4M. Both grants will run from August 31, 2003 through August 30, 2004.

Additional federal grants related to emergency preparedness, including public health emergencies, are also available. The Federal Office of Domestic Preparedness has granted a total of $50.7M to North Carolina for a wide variety of programs related to first responders and other emergency programs. These funds are being allocated through a grant process headed up by the state Division of Emergency Management. Public health personnel are specifically included in the definition of "first responders" within the context of these grants. So, it should be possible for these grant funds to be used for items such as personal protective equipment, etc. for public health workers.

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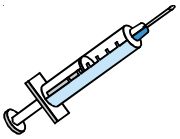
Smallpox Vaccination Update

Prepared by Jim Kirkpatrick, MD, MPH, Head
Office of Public Health Preparedness and Response



Vaccination injury compensation legislation at the Federal level was passed by Congress and signed by the President on April 30. The Smallpox Emergency Personnel Protection Act of 2003 provides up to $262,100 in death or disability benefits as well as up to $50,000 for medical expenses or lost wages. The US Department of Health and Human Services is now writing the rules for making claims under this program. Compensation under this new law will be retroactive to the date the national program was announced, so all North Carolina vaccinees under the State's program should be eligible for compensation under the act. Our legislature has passed HB 273, which strengthens compensation for state employees. We have asked Chris Hoke to put together a "primer" on how a person who believes he was injured by the vaccine makes a claim under either of these programs.

The Institute of Medicine's Letter Report #3 issued May 23, 2003 recommends a pause in the smallpox vaccination program pending resolution of a number of issues. Among these are: safety of the vaccine; changed circumstances, especially regarding the need for updated patient education materials; and the need for metrics to evaluate overall smallpox preparedness. The matter is under intense study in the Division of Public Health. A decision on the further progress of the NC Smallpox Vaccination Plan will be forthcoming.

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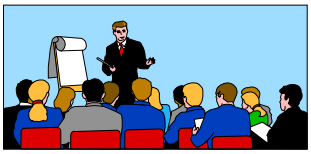
Emerging Waterborne Pathogens: Public Health Implications Conference: October 30-31, 2003

Prepared by Douglas S. Campbell, MD, MPH, Head
Occupational and Environmental Epidemiology Branch



Since March, 1998, the Occupational and Environmental Epidemiology Branch (OEEB) has been working on the Centers for Disease Control and Prevention (CDC) funded cooperative agreement, "Pfiesteria-Related Illness Surveillance and Prevention." This is also known as the "Harmful Algal Blooms Program." This work has involved research by many scientists and research centers on many aspects of known and newly described waterborne pathogens. The accomplishments of this work will be presented at a conference, "Emerging Waterborne Pathogens: Public Health Implications Conference." The conference will be on October 30 and 31, 2003, in Wrightsville Beach, North Carolina at the Blockade Runner Hotel. The conference agenda will include the following topics: blue-green algae; antimicrobial resistant organisms in the environment; the use of geographic information systems in public health; vibriosis; Eastern NC waterborne dermatoses; and Pfiesteria – basic science and human studies. Speakers for this conference include university researchers, state and local public health officials, and CDC officials. The target audience is public health and environmental professionals and researchers, health care providers, and concerned citizens. For information please call Bill Pate at the OEEB at 715-6432 or Dr. Newt MacCormack at 715-2794.

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Reported Communicable Disease Cases, North Carolina, January-June 2003 (by date of report)*

Disease	Year-to-Date (Second Quarter)			2nd Quarter 2003	Comments / Note
	2003	2002	Mean (98-2002)		
Campylobacter	**275**	239	224	129	
Chlamydia, laboratory reports	**13031**	12073	11280	7007	
Cryptosporidiosis	**15**	21	-	6	Note 1 & 2
Cyclosporiasis	**1**	0	-	0	Note 1 & 2
Dengue	**2**	1	0	0	
E. coli O157:H7	**-**	16	18	-	Note 3 and 10
E. coli, Shiga toxin-producing	**11**	-	-	5	Note 9 and 10
Ehrlichiosis, Monocytic	**5**	1	-	0	Note 1 & 2
Encephalitis, California group	**5**	1	-	1	Note 1 & 4
Foodborne, C. Perfringens	**2**	0	10	0	
Foodborne, other	**21**	3	3	18	
Foodborne, staphylococcal	**1**	57	15	0	
Gonorrhea	**7541**	7989	8805	4034	
Haemophilus influenzae	**15**	21	20	10	
Hepatitis A	**33**	128	79	11	
Hepatitis B, acute	**96**	131	121	56	
Hepatitis B, chronic	**497**	477	364	293	
Hepatitis B, perinatal	**1**	-	-	1	
Hepatitis C, acute	**5**	14	-	2	Note 1 & 4
HUS-TTP	**2**	2	-	1	Note 1 & 2
HIV/AIDS	**1111**	777	795	538	Note 5
Legionellosis	**16**	5	6	9	
Leptospirosis	**1**	0	1	1	
Listeriosis	**10**	3	-	5	Note 8
Lyme disease	**20**	46	22	8	
Malaria	**8**	9	9	3	
Measles	**1**	0	0	1	
Meningococcal disease	**19**	17	32	13	
Meningitis, pneumococcal	**11**	31	33	4	
Mumps	**2**	1	4	0	
Rabies, animal	**387**	323	291	209	
Rocky Mountain Spotted Fever	**60**	91	41	26	
Salmonellosis	**483**	495	429	222	
Shigellosis	**449**	144	130	244	
Strepto. A, invasive	**66**	89	-	35	Note 2
Syphilis, total	**247**	332	569	132	Note 6
Tuberculosis	**143**	158	183	106	
Tularemia	**1**	1	1	0	
Typhoid, Acute	**5**	0	1	4	
Vaccinia	**1**	-	-	0	Note 8
Vibrio vulnificus	**1**	0	1	1	
Vibrio, other	**3**	4	-	0	Note 2
Vanco. Resistant Enterococci	**262**	312	-	135	Note 2
Whooping cough	**71**	20	38	26	

* Preliminary data, as of 7/21/2003. Quarters are defined as 13 weeks periods.

Notes: 1. - =Not reportable in this entire time period; 2. Became reportable 8/1/1998; 3. Became reportable 10/1/1994; 4. Became reportable as such 8/1/1998; previously within other category ("Encephalitis"; and "Hepatitis, non A-non B"); 5. Earliest report with HIV infection or AIDS diagnosis; 6. Primary, secondary and early latent syphilis; 7. Became reportable 7/1/1997; 8. Became reportable 7/2001; 9. Became reportable 2/15/2003; 10. Replaces E. coli O157:H7 as of 2/15/2003.

Evelyn Foust Receives Honor

Prepared by Patsy P. West, Administrative Assistant
Epidemiology Section

Evelyn Foust, CPM, MPH, Head of the HIV/STD Prevention and Care Branch, recently received the 2003 Nicholas A. Rango, MD Leadership Award. This award is given each year during NASTAD's annual meeting to the AIDS director or state and territorial health department staff who best exemplifies the qualities of superior intelligence, dedication, activism in government and impatience of Dr. Rango in continuing to lead the fight against HIV/AIDS.

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Employee Recognition: Employee of the Quarter Aubrey Wiggins

Prepared by Patsy P. West, Administrative Assistant
Epidemiology Section

Aubrey Wiggins has received the Epidemiology Section's Employee Award for the Summer Quarter of 2003. He was nominated in the category of Volunteerism.

Mr. Wiggins has been a public health employee with the State Laboratory of Public Health since 1972. He is a Cytoprep Lab Supervisor where he and his staff are responsible for preparing pap slides for screening.

Mr. Wiggins is an outstanding employee in the State Laboratory of Public Health and an outstanding human being as well. He has managed blood drives for the Red Cross for public health employees for more than twenty years as well as donating gallons of blood himself. He has also been a regular Aphersis donor. He is known for giving of his time to various charitable projects. He has helped many Laotian and Montagnard refugee families successfully relocate. He has also been an active volunteer with Habitat for Humanity, a troop leader with the Pines of Carolina Girl Scout Council and has spent many hours tutoring and chaperoning trips with the Wake County Public Schools. For many years, he has spread Christmas cheer to numerous organizations and individuals as Santa Claus. He exemplifies what a difference one person can make.

In addition to receiving the Epidemiology Section's Employee Recognition Award, Mr. Wiggins will be presented with a gift certificate from the Section Management Team.

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Kristina Simeonsson, MD, MSPH Joins the General Communicable Disease Control Branch

Prepared by Jean-Marie Maillard, MD, MSc.
General Communicable Disease Control Branch

Kristina Simeonsson joined the GCDC Branch on May 1st, 2003. Kristina (Krissy) trained at the UNC School of Medicine in Chapel Hill. She is a Board Certified Pediatrician who did her residency training at the East Carolina University Brody School of Medicine in Greenville, NC, where she was highly regarded. While in Greenville, Krissy became Chief Resident, then Clinical Assistant Professor in Pediatrics after her residency, which also gave her an opportunity to work with several local health departments, providing pediatric consultations and supervising residents in their rotations. Krissy's Master of Science degree in Public Health is from the UNC-Chapel Hill School of Public Health. While in medical school, Krissy accumulated several awards for her commitment to community service and to the practice of primary care. She is such a good advocate for public health that her husband, trained in history and accounting, will go back to school to pursue a degree in Public Health in the fall!

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Mailing Diagnostic Specimens: Recent Changes in US Postal Service Regulations

Prepared by Kristy Osterhout, BS, SLS(ASCP),
Lab Improvement Consultant
North Carolina State Laboratory of Public Health

The State Laboratory of Public Health supplies test kits to be used to collect and submit specimens for analysis. In the past, specimens placed inside the provided "fiberboard mailing containers" could be sent to the State Lab via State Courier or US Postal Service (USPS). Due to recent regulations published by the USPS, the State Laboratory's "fiberboard mailing containers" can no longer be used in the USPS system.

As of April 30, 2003, these "cardboard shipping containers" can only be used for diagnostic specimens in Risk Group 1, 2 and 3 if sent via State Courier. They cannot be sent through the USPS system. According to the USPS regulations, "Diagnostic (clinical) specimen means any human or animal material, including excreta, secreta, blood and its components, tissue and tissue fluids being transported for diagnos-

tic or investigational purposes, but excluding live animals." If a specimen is suspected or known to contain a pathogen, the specimen should be classified as an infectious substance. According to the USPS "infectious substance means a material known to contain or suspected containing a pathogen". Infectious substances must be shipped within a certified triple packaging system. Current packaging systems using fiberboard or aluminum canisters, zippered bags, or other uncertified components are not in compliance for shipping via USPS system.

The Laboratory Improvement Unit of the NCSLPH will be conducting certification classes for health department personnel responsible for packaging and shipping diagnostic specimens in the Fall 2003. For more information please contact Kristy Osterhout at 919/733-7186 or by email Kristy.Osterhout@ncmail.net

Sources:

- ❑ Federal Register/Vol.67, No. 244/Thursday, December 19/2002/Proposed Rules
- ❑ http://www/saftpak.com
- ❑ http://hazmat.dot.gov/

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Using Screening Measures to Prevent Varicella Disease During Pregnancy

Prepared by Laura Leonard, Public Information Officer, North Carolina Immunization Branch

Varicella (chickenpox) is a highly contagious and potentially dangerous disease. Adults experience only 10 percent of the varicella cases seen annually, but represent about half of the deaths recorded. Of particular concern is the number of women of childbearing age lacking immunity to the disease, risking potential infection to themselves and their unborn babies.

Varicella disease in pregnancy can result in significant complications for both the expectant mother and the unborn child. Pregnant women have an increased susceptibility to varicella pneumonia, which often results in respiratory failure, necessitating a prolonged hospitalization and mechanical ventilatory support. A fetus that acquires varicella disease may develop congenital varicella syndrome (CVS), manifested by low birth weight, hypoplasia of one or more limbs, scarring of the skin or encephalitis. Spontaneous abortion may occur in up to 30 percent of these cases.

Health care providers play a vital role in the prevention of varicella disease in pregnant women and their unborn children. Prenatal screening protocols should include assessing for a documented history of varicella disease or having been immunized for the disease. If it is determined that a woman is not protected against the disease, she should be cautioned to contact her physician immediately if she is exposed to someone with varicella disease.

Pregnant women who are exposed to varicella should receive varicella zoster immune globulin (VZIG) within 96 hours of the exposure, in an attempt to modify or prevent varicella disease. VZIG is used for susceptible individuals at high risk of complications from varicella disease. It provides only temporary protection, lasting about three weeks. All pregnant women exposed to varicella, regardless of whether VZIG has been administered, should have a fetal assessment for CVS.

The recommended dose of VZIG is 125 units per 10 kilograms of body weight. VZIG must be administered within 96 hours of the exposure to be effective. At an approximate cost of $600 per adult dose, VZIG is available for purchase by physicians and hospitals from FFF Enterprises by calling 1-800-843-7477. The company will ship VZIG for next day delivery. North Carolina local health departments may contact the N.C. Immunization Branch at (919) 733-7752 for assistance in purchasing VZIG for their **non-Medicaid or uninsured** maternity patients.

If for some reason VZIG cannot be provided within 96 hours for the pregnant woman with a varicella exposure, it is critical to educate the patient on symptoms of varicella pneumonia. The exposed pregnant woman should seek medical attention if she begins to develop even minor cold symptoms. Early treatment may be able to reduce the severity of this disease.

Varicella vaccine is a live virus vaccine and is not recommended for administration to pregnant women. However, after a known susceptible woman delivers, she should be encouraged to receive the two-dose series of varicella vaccine to reduce the risk to her general health from the disease, particularly if she has plans for future pregnancies.

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